

ABSTRACT OF THE DISCLOSURE

[00037] The present disclosure relates to electroslag remelting methods and apparatus for producing metallic ingots, as well as to articles of manufacture made from materials processed according to the methods and/or using the apparatus. One such method includes disposing slag within a withdrawal mold comprising a mold wall and an electrically conductive member disposed through the mold wall, contacting the slag with a consumable electrode, and heating the slag by conducting an electrical current through the consumable electrode into the slag, thereby melting at least a portion of the consumable electrode in contact with the slag. At least a fraction of the melted portion of the consumable electrode is collected in the withdrawal mold to form the ingot. At least a portion of the electrical current is conducted from the slag through the electrically conductive member.